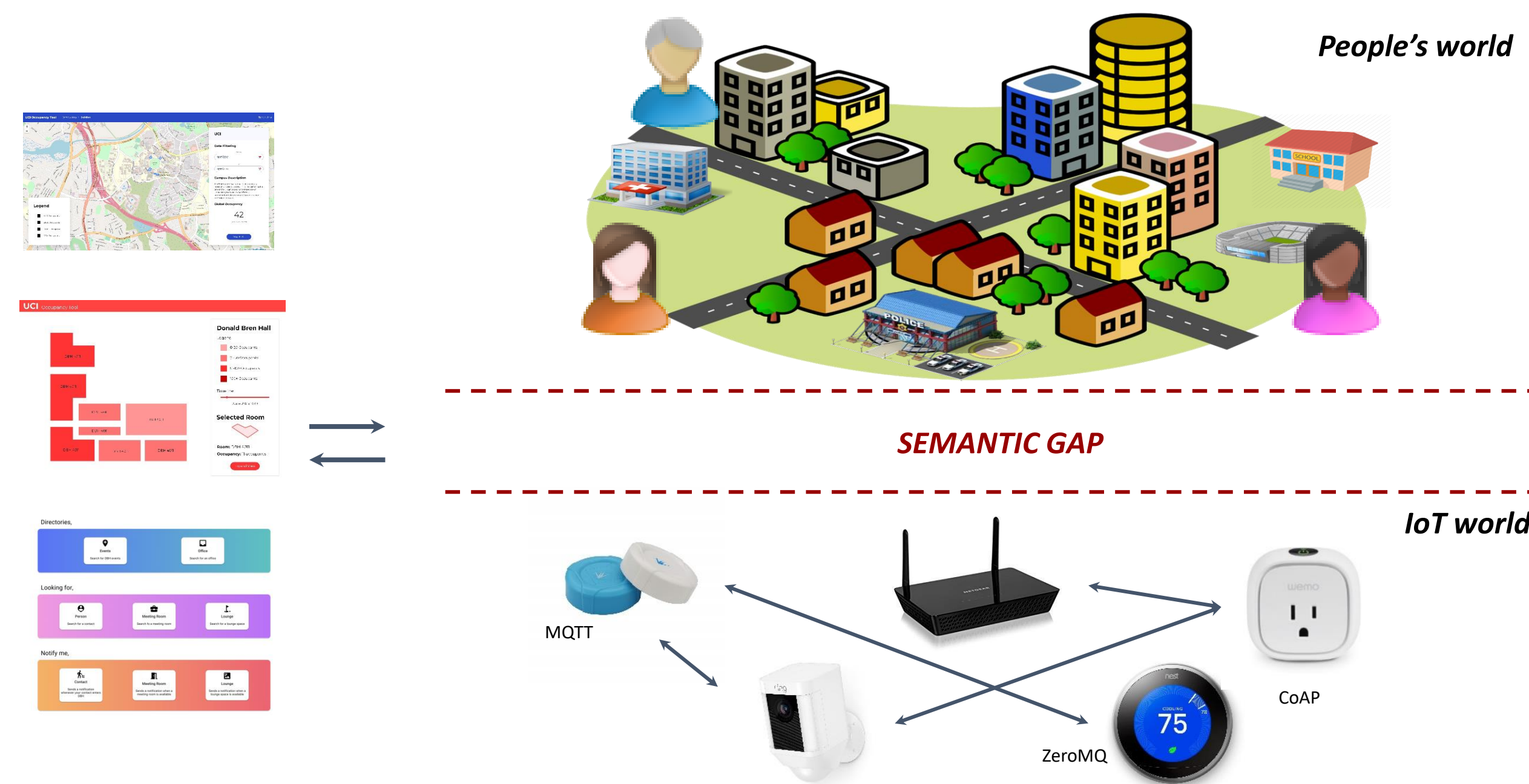


# SemIoTic: Bridging the Semantic Gap in IoT Spaces

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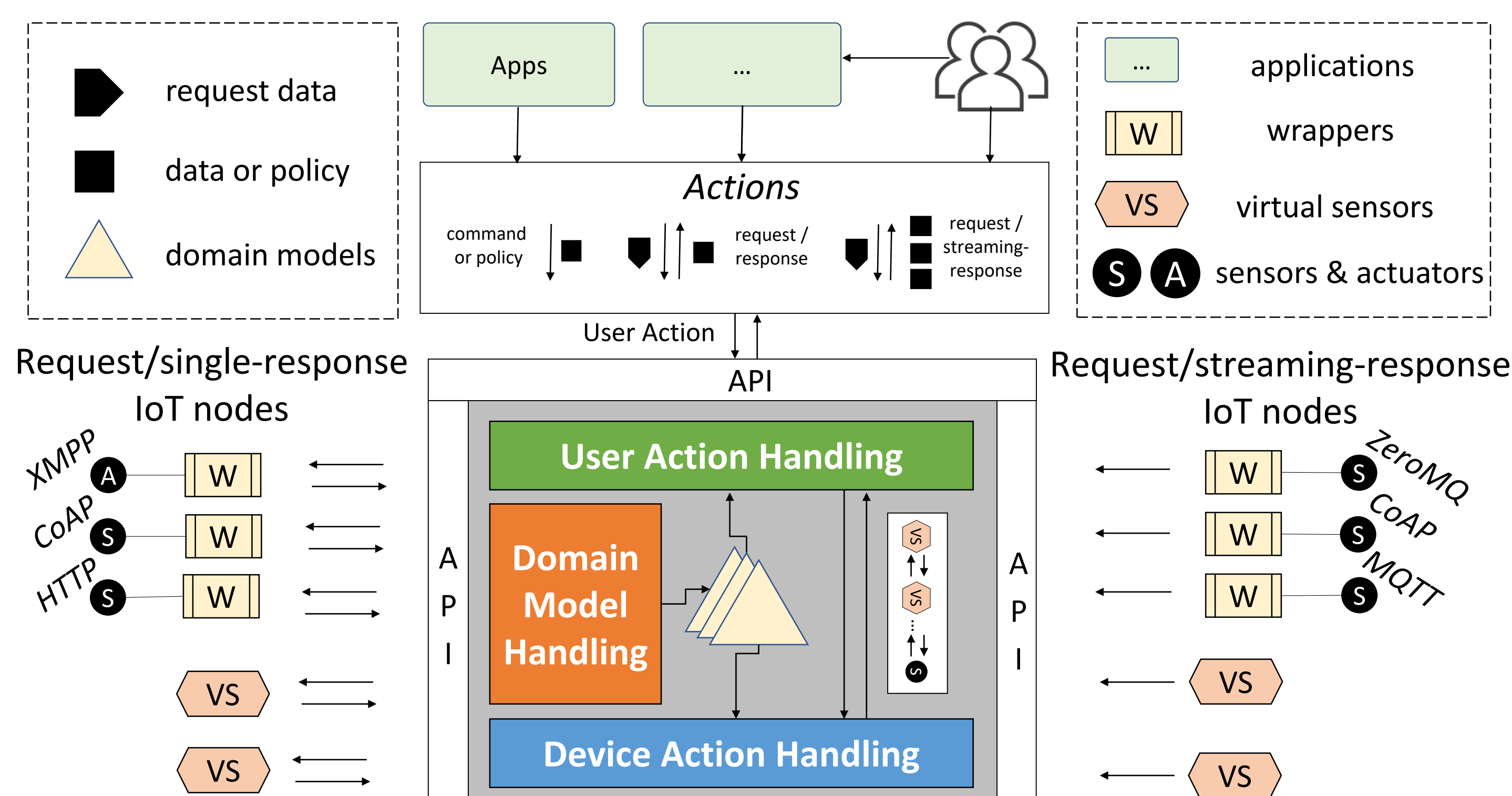
## Motivation



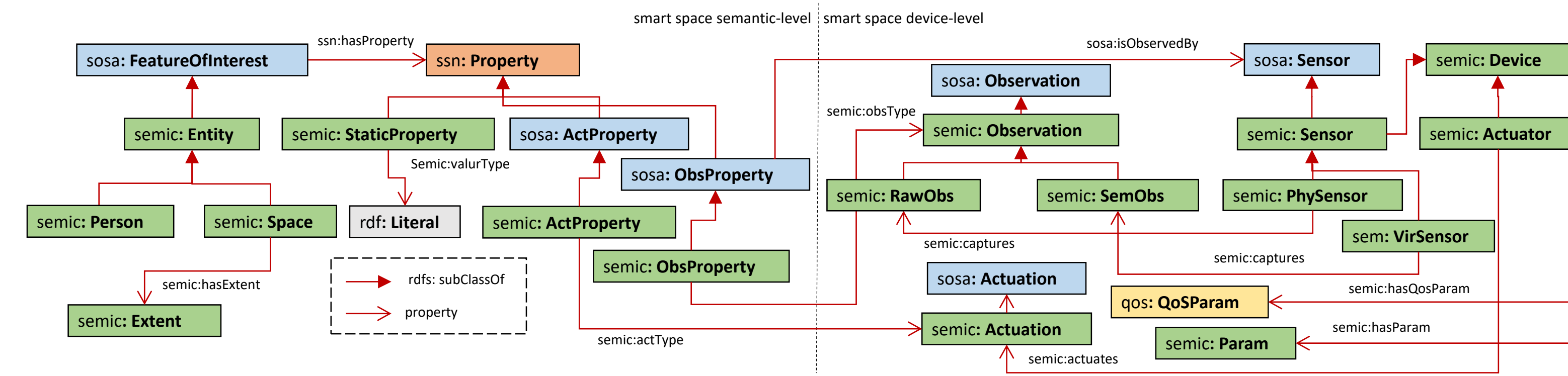
SemIoTic addresses three main challenges:

- 1- Interoperability:** Manufacturers of IoT devices use diverse mechanisms across multiple layers to enable communication with their platforms. An end-to-end solution that includes smartspaces, applications and devices is required.
- 2- Reusability:** Developers should create smart applications that can be deployed and reused across multiple contexts -- e.g., smart homes, offices and cities, regardless of the underlying device infrastructure.
- 3- User Privacy:** There is a significant legislative support for user privacy. Users should understand what data is being collected/inferred about them and thus, expressing their preferences about it.

## High-level Architecture

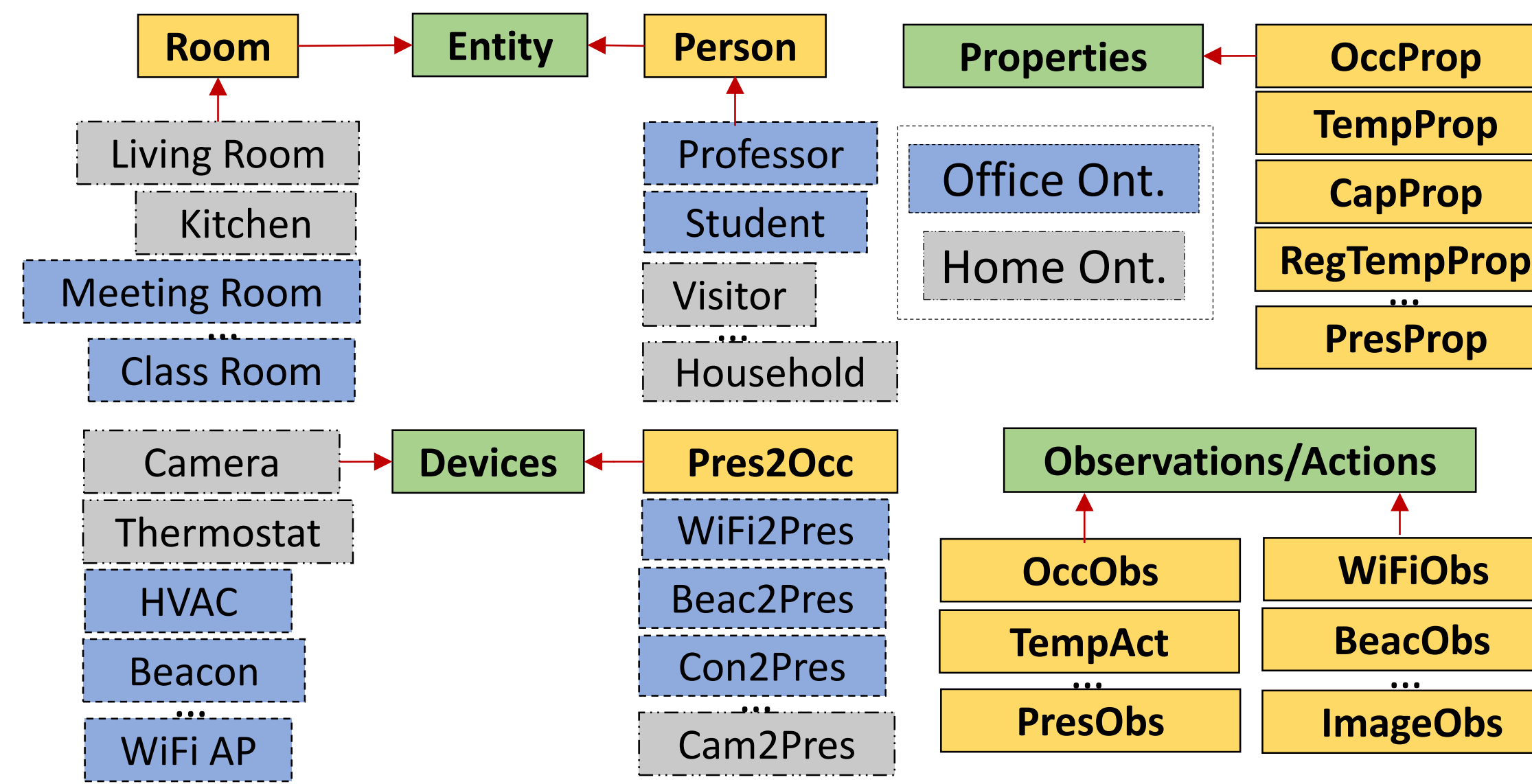


## Domain Model Handling



The SEMIC meta ontology supports the definition of the higher-level concepts of the IoT space – i.e., types of spaces, users and sensors/actuators, as well as specific instances of those types.

## Smart building/home Domain Model



## User Action Handling

